

**EFFICACY REVIEW**  
**ULV MOSQUITO MASTER 412; EPA Registration Number: 8329-36**

**DATE:** 11/01/05

**DP BARCODE:** D322278

**GLP:** No

**CHEMICAL:** Chlorpyrifos.....059101  
Permethrin.....109701

**PURPOSE:** The purpose of this review was to determine if the data submitted in response to the Agency efficacy review dated May 19, 2004, fulfilled requirements for reregistration.

**MRID:** 46651901. Krenick, F. (2005) ULV Mosquito Master 412: Mosquito Adulticide Efficacy Test: Aerial ULV. Project Number: CR832936/1. Unpublished study prepared by Clarke Mosquito Control Products Inc. 21p.

**SRRD REVIEWER:** Venus Eagle

**EFFICACY REVIEWER:** Kable Bo Davis; M.S., Entomologist

**SECONDARY**  
**EFFICACY REVIEW:** Joanne S. Edwards; M.S., Entomologist

**BACKGROUND:**

ULV Mosquito Master 412 is used for the quick knockdown and outdoor control of adult mosquitoes in residential and recreational areas, and can only be applied by "public health officials and trained personnel of mosquito abatement districts and other mosquito control programs". ULV Mosquito Master 412 is labeled for ULV nonthermal (cold fog) applications, and can be applied using any standard ULV ground applicator mounted such that the nozzle is at least 4 ½ feet above ground level. Droplet size should range from 5 to 30 microns, and have a MMD of 10 to 20 microns. Equipment should be calibrated to deliver 0.005 to 0.021 pounds of undiluted chlorpyrifos and 0.0017 to 0.007 pounds of undiluted permethrin per acre. Aerial applications should be applied using suitable aerial ULV equipment producing droplet sizes of 50 microns or less, and having flow rates and swath widths set to deliver 3.0 fluid ounces per acre.

Clarke Mosquito Control Products, Inc. is responding to comments made in the last efficacy review dated May 19, 2004. MRID #46651901 has been submitted in an attempt to fulfill the efficacy data necessary for aerial applications, as stated within the May 19, 2004 review.

## DATA REVIEW:

The following data review is comprised of explanations of materials and methods, and a summation of experimental results containing a table with reformatted data.

**46651901. Krenick, F. (2005) ULV Mosquito Master 412: Mosquito Adulticide Efficacy Test: Aerial ULV. Project Number: CR832936/1. Unpublished study prepared by Clarke Mosquito Control Products Inc. 21p.**

The objective of this study was to determine the efficacy of ULV Mosquito Master 412 against adult mosquitoes (*Oc. taeniorhynchius*) when applied via aerial application. All repetitions took place during prime mosquito activity times, and all times and atmospheric conditions were recorded.

Each of the three replications consisted of five experimental cages containing 25 adult female mosquitoes (caught the night before using CO<sub>2</sub> traps). A total of five “control” cages were used for the entire test. Treatments were made at an altitude of 200 feet with 1,500 foot swaths. Each of the treatment cages were placed in a row 100 feet apart in a straight line perpendicular to the wind, and were allowed 20 minutes exposure after application. Upon completion of the exposure period, all mosquitoes were transferred to clean holding cages, and observations on knockdown and mortality were recorded.

Reported Results:

**Table 1. Knockdown & Percent Mortality of *Oc. taeniorhynchius* When Treated with ULV Mosquito Master 412 Applied Via Aerial Application**

	<b>Knockdown 1-Hour</b>	<b>% Mortality 24-Hours</b>	<b>% Mortality (Control) 24-Hours</b>
<b>Replicate 1</b>	100%	100%	4%
<b>Replicate 2</b>	100%	100%	4%
<b>Replicate 3</b>	100%	100%	4%

The data demonstrated both 100% 1-hour knockdown and 100% 24-hour mortality of *Oc. taeniorhynchius* when exposed to ULV Mosquito Master 412 when applied via aerial application for all three replications.

## RECOMMENDATIONS:

The submitted data support the use of ULV Mosquito Master 412 being applied aerially for the control of adult mosquitoes.